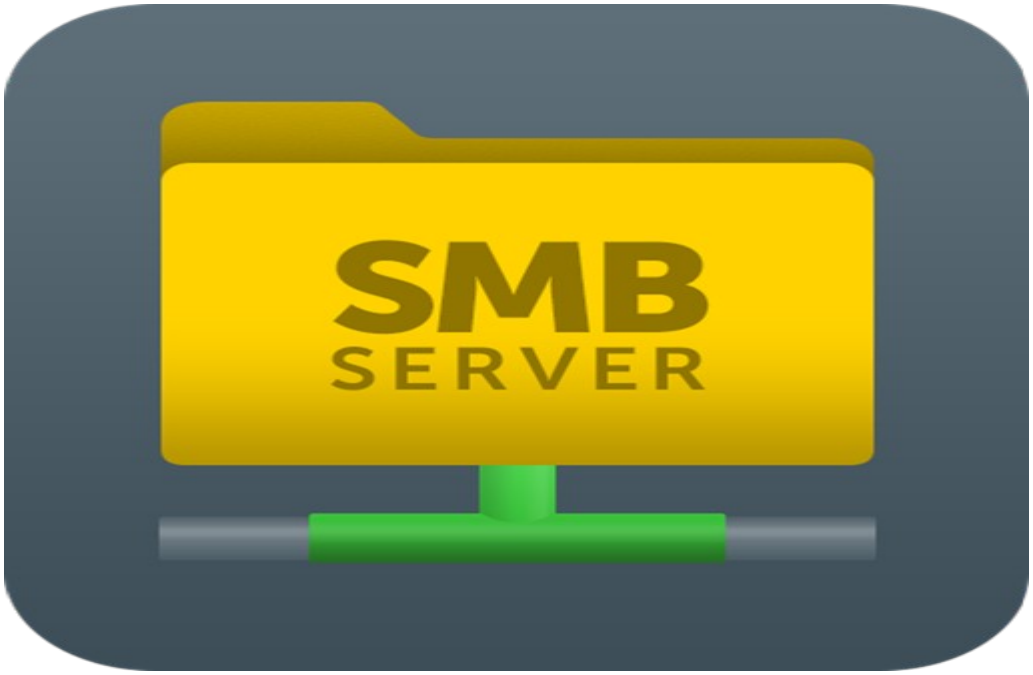
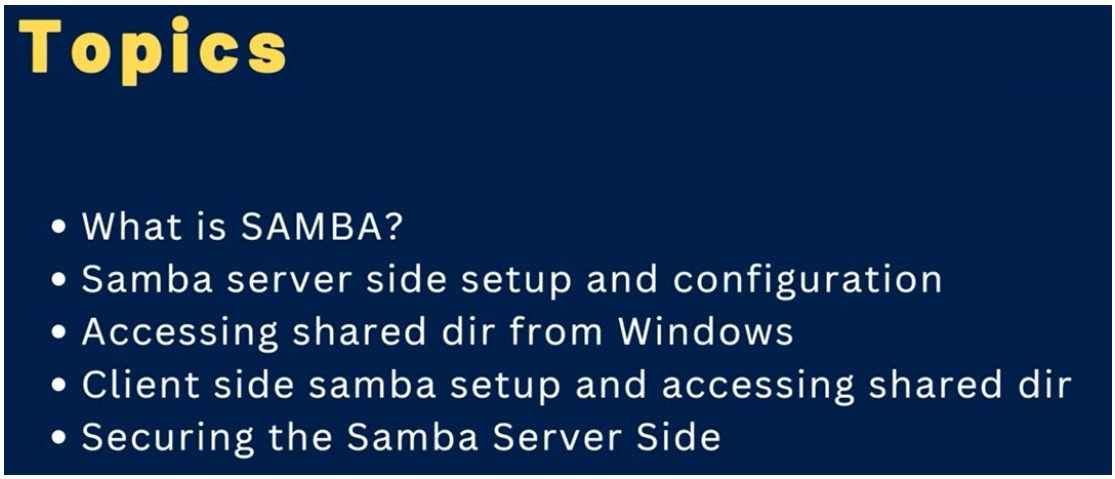
Create SAMBA Server on RHEL-v9 / Linux Centos on Windows Operating System



Linux Samba server. By following our simple step-by-step guide, you'll be able to Garrett your network and share files between your Windows and Linux systems with ease!

If you're looking to set up a Linux Samba server, then this video is for you! By the end, you'll have everything you need to know to get started, including instructions on how to configure the server and access it from your Windows systems. Don't miss out on this exciting tutorial!

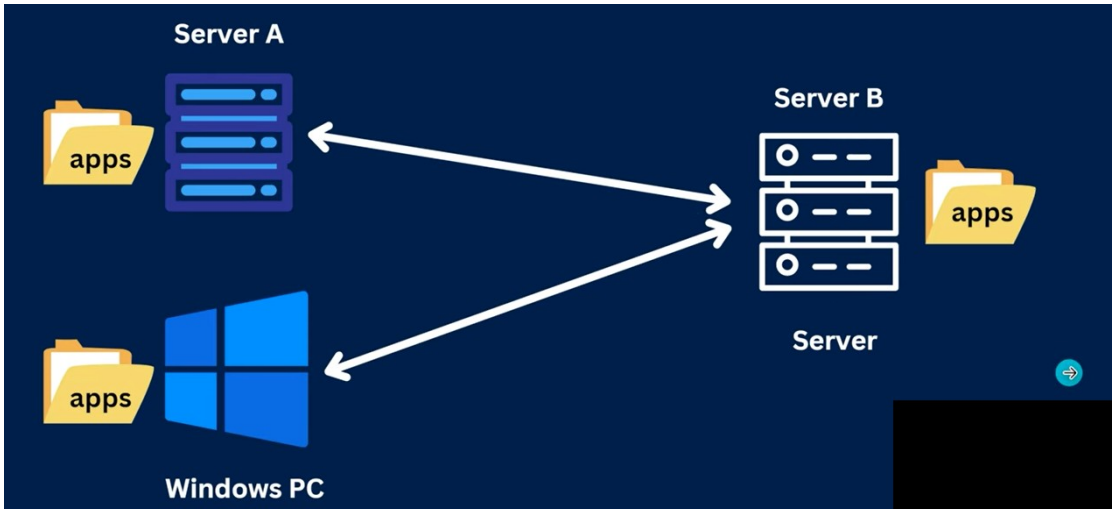
You'll be amazed by what you can do with a Linux Samba server! Not only can you access your files from any computer in your office, but you can also share files and printers with other users on your network. If you're looking to set up a Linux Samba server for work or for personal use,



SAMBA

A Linux utility or tool to share Linux files and print services to other OS.

Using *Server Message Block (SMB)* and *Common Internet File System (CIFS)* protocols



Server Side Configuration

- **To install Samba Packages**

```
yum install samba samba-client samba-common
```

- **Enable Samba through Firewall**

```
firewall-cmd --permanent --zone=public --add-service=samba
firewall-cmd --reload
```

```
[root@cs-server ~]# yum install samba samba-client samba-common -y
Last metadata expiration check: 2:04:49 ago on Saturday 01 April 2
023 11:39:16 AM EDT.
Package samba-4.17.5-0.el8.x86_64 is already installed.
Package samba-client-4.17.5-0.el8.x86_64 is already installed.
Package samba-common-4.17.5-0.el8.noarch is already installed.
Dependencies resolved.
Nothing to do.
Complete!
[root@cs-server ~]#
```

```
[root@cs-server ~]#
[root@cs-server ~]# systemctl status firewalld.service
```

```
● firewalld.service - firewalld - dynamic firewall daemon
     Loaded: loaded (/usr/lib/systemd/system/firewalld.service; ena>
     Active: inactive (dead) since Sat 2023-04-01 09:51:05 EDT; 3h >
       Docs: man:firewalld(1)
    Process: 1056 ExecStart=/usr/sbin/firewalld --nofork --nopid $F>
   Main PID: 1056 (code=exited, status=0/SUCCESS)

Apr 01 09:47:26 cs-server systemd[1]: Starting firewalld - dynami>
Apr 01 09:47:27 cs-server systemd[1]: Started firewalld - dynamic>
Apr 01 09:47:27 cs-server firewalld[1056]: WARNING: AllowZoneDrif>
Apr 01 09:51:05 cs-server systemd[1]: Stopping firewalld - dynami>
Apr 01 09:51:05 cs-server systemd[1]: firewalld.service: Succeede>
lines 1-12/12 (END)
```

Server Side Configuration

- Create a directory for Samba and give all the permissions

```
mkdir /samba/apps
```

- Change SELinux security context for samba shared directory in case SELinux is enabled

```
chcon -t samba_share_t /samba/apps
```

 # Go to Root / Dir

```
[root@cs-server /]#
[root@cs-server /]# mkdir -p /samba/apps
[root@cs-server /]# cd /samba/apps/
[root@cs-server apps]# touch samba_testfile
[root@cs-server apps]# ls
samba_testfile
[root@cs-server apps]# cd
[root@cs-server ~]# cd /samba/apps/
[root@cs-server apps]# ls -ltr
total 0
-rw-r--r--. 1 root root 0 Apr  1 13:47 samba_testfile
[root@cs-server apps]#
```

```
[root@cs-server /]#
[root@cs-server /]#
[root@cs-server /]# chmod a+rwx samba/
[root@cs-server /]# chmod a+rwx samba/apps/
[root@cs-server /]# chmod a+rwx samba/apps/*
[root@cs-server /]#
```

- **Change SELinux security context for samba shared directory in case SELinux is enabled**

```
chcon -t samba_share_t /samba/apps
```

```
[root@cs-server /]#
[root@cs-server /]# cd
[root@cs-server ~]#
[root@cs-server ~]# chcon -t samba_share_t /samba/apps/
[root@cs-server ~]#
```

Server Side Configuration

- Modify /etc/samba/smb.conf file to add our shared dir

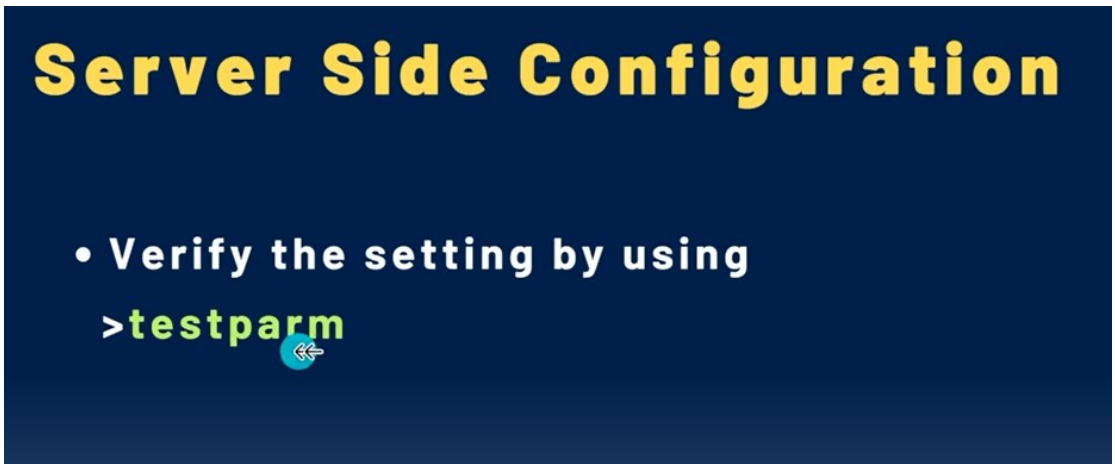
```
[global]
 workgroup = SAMBA
netbios name = centos
security = user
map to guest = bad user
dns proxy = no
```

```
[Apps]
path = /samba/apps
browsable = yes
writable = yes
guest ok = yes
guest only = yes
read only = no
```

```
[root@cs-server ~]#
[root@cs-server ~]# vi /etc/samba/smb.conf
```

```
# See smb.conf.example for a more detailed config file or
# read the smb.conf manpage.
# Run 'testparm' to verify the config is correct after
# you modified it.
#
# Note:
# SMB1 is disabled by default. This means clients without support for SMB2 or
# SMB3 are no longer able to connect to smbd (by default).

~
~
```

```
# SMB3 are no longer able to connect to smbd (by default).

[global]
        workgroup = SAMBA
        netbios name = centos
        security = user
        map to guest = bad user
        dns proxy = no
        hosts allow = 192.168.0.0/24

[Apps]
        comment = Shared Dir
        path = /samba/apps
        browsable = yes
        writable = yes
        guest ok = yes
        guest only = yes
        read only = no

-- INSERT --
```



test

```
[root@cs-server ~]# testparm
Load smb config files from /etc/samba/smb.conf
Loaded services file OK.
Weak crypto is allowed by GnuTLS (e.g. NTLM as a compatibility fallback)

Server role: ROLE_STANDALONE

Press enter to see a dump of your service definitions
```

```
# Global parameters
[global]
        dns proxy = No
        map to guest = Bad User
        netbios name = CENTOS
        security = USER
        workgroup = SAMBA
        idmap config * : backend = tdb


[Apps]
        comment = Shared Dir
        guest ok = Yes
        guest only = Yes
        path = /samba/apps
        read only = No
[root@cs-server ~]#
```

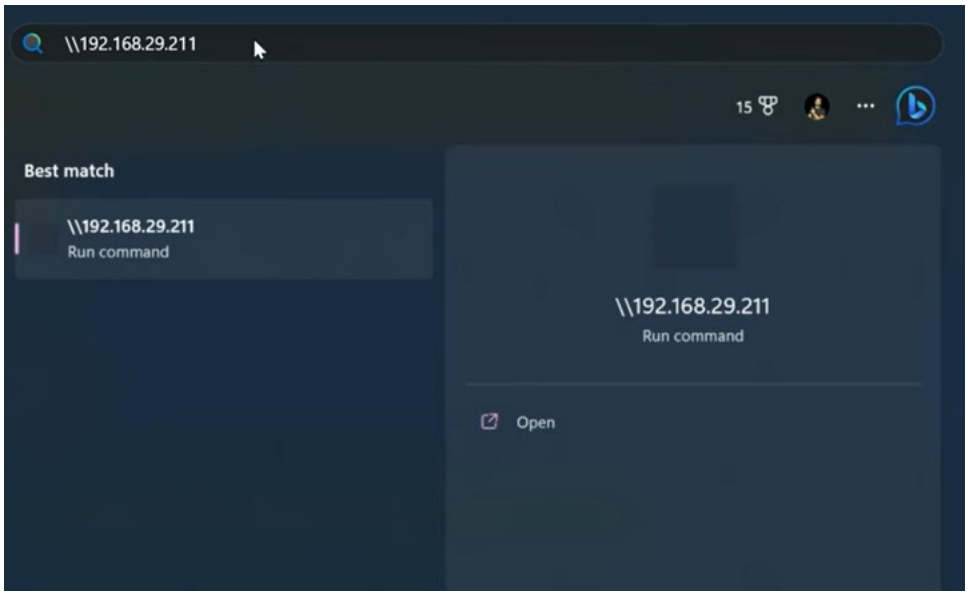
Server Side Configuration

- Enable and start the services

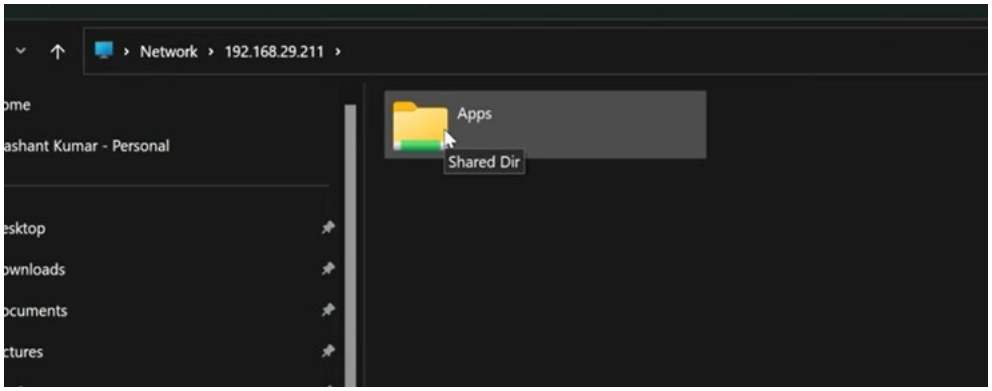
```
>systemctl enable smb nmb
>systemctl start smb nmb
```

```
[root@cs-server ~]#
[root@cs-server ~]# systemctl start smb nmb
[root@cs-server ~]# systemctl status smb nmb
```

```
● smb.service - Samba SMB Daemon
     Loaded: loaded (/usr/lib/systemd/system/smb.service; disabled; ven>
     Active: active (running) since Sat 2023-04-01 13:55:14 EDT; 7s ago
       Docs: man:smbd(8)
             man:samba(7)
             man:smb.conf(5)
   Main PID: 16067 (smbd)
     Status: "smbd: ready to serve connections..."
      Tasks: 3 (limit: 11222)
     Memory: 6.3M
     CGroup: /system.slice/smb.service
             ├─16067 /usr/sbin/smbd --foreground --no-process-group
             ├─16070 /usr/sbin/smbd --foreground --no-process-group
             └─16071 /usr/sbin/smbd --foreground --no-process-group

Apr 01 13:55:14 cs-server systemd[1]: Starting Samba SMB I
Apr 01 13:55:14 cs-server smbd[16067]: [2023/04/01 13:55:1
Apr 01 13:55:14 cs-server smbd[16067]:   smbd version 4.1'
lines 1-18
```



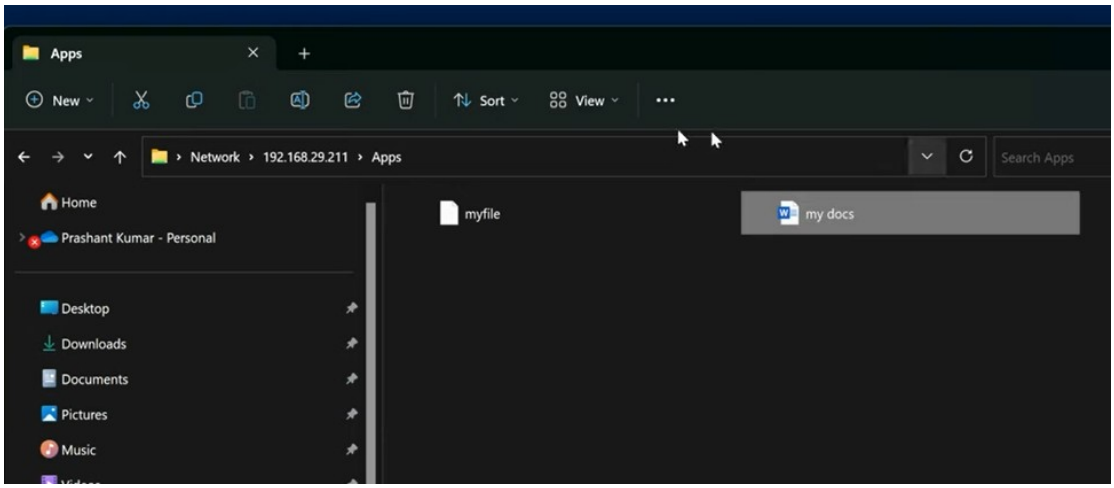
App folder created in windows through Linux Server



 # Create a file in root - server (Samba app) Check the status on Windows folder

```
[root@cs-server ~]#
[root@cs-server ~]# cd /samba/apps/
[root@cs-server apps]# ls
samba_testfile
[root@cs-server apps]# touch myfile
[root@cs-server apps]#
```

 # open the folder Check the file & edit it do some changes Check the same in Linux Server




```
[root@cs-server apps]# ls -ltr
total 0
-rwxrwxrwx. 1 root   root   0 Apr  1 13:47  samba_testfile
-rw-r--r--. 1 root   root   0 Apr  1 13:57  myfile
-rwxr--r--. 1 nobody nobody 0 Apr  1 13:57 'my docs.docx'
[root@cs-server apps]#
```

Client Side Configuration

- To install SAMBA Packages

  `yum install cifs-utils samba-client`

```
[root@cs-client ~]#
[root@cs-client ~]# yum install cifs-utils samb
a-client -y
   sssd-ad-2.8.2-1.el8.x86_64
   sssd-client-2.8.2-1.el8.x86_64
   sssd-common-2.8.2-1.el8.x86_64
   sssd-common-pac-2.8.2-1.el8.x86_64
   sssd-ipa-2.8.2-1.el8.x86_64
   sssd-kcm-2.8.2-1.el8.x86_64
   sssd-krb5-2.8.2-1.el8.x86_64
   sssd-krb5-common-2.8.2-1.el8.x86_64
   sssd-ldap-2.8.2-1.el8.x86_64
   sssd-proxy-2.8.2-1.el8.x86_64
 Installed:
   cifs-utils-7.0-1.el8.x86_64
   samba-client-4.17.5-0.el8.x86_64

 Complete!
 [root@cs-client ~]#
```

Client Side Configuration

- Create a mount point (a directory)

```
mkdir /mnt/samba/apps
```

- Mount the Samba dir

```
mount -t cifs <IP_Server>/Apps /mnt/samba/apps
```

```
[root@cs-client ~]#
[root@cs-client ~]# cd /
[root@cs-client /]#
[root@cs-client /]# cd /mnt/
[root@cs-client mnt]#
[root@cs-client mnt]# mkdir -p samba/apps
[root@cs-client mnt]# cd samba/apps/
[root@cs-client apps]# pwd
/mnt/samba/apps
[root@cs-client apps]#
```

Note: Enter Without passwd

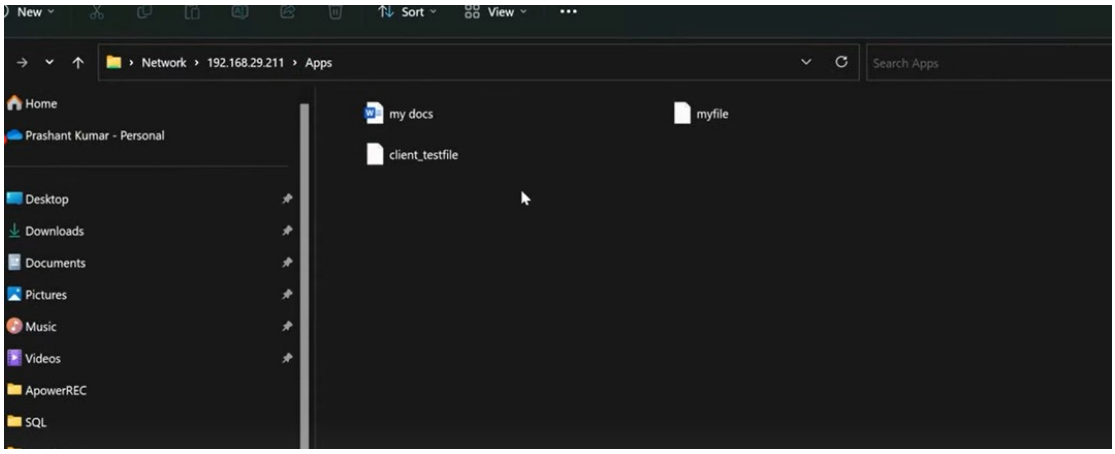
```
[root@cs-client apps]# mount -t cifs //192.168.29.211/Apps /mn
t/samba/apps/
Password for root@//192.168.29.211/Apps:
[root@cs-client apps]#
```

```
[root@cs-client ~]# df -h
Filesystem              Size  Used Avail Use% Mounted on
devtmpfs                360M     0  360M   0% /dev
tmpfs                   389M     0  389M   0% /dev/shm
tmpfs                   389M  6.2M  383M   2% /run
tmpfs                   389M     0  389M   0% /sys/fs/cgroup
/dev/mapper/cs-root      17G  6.8G   11G  40% /
/dev/nvme0n1p1         1014M  258M  757M  26% /boot
tmpfs                    78M   12K   78M   1% /run/user/42
tmpfs                    78M  4.0K   78M   1% /run/user/1000
//192.168.29.211/Apps    17G  6.5G   11G  38% /mnt/samba/apps
[root@cs-client ~]#
```

```
[root@cs-client apps]#
[root@cs-client apps]# pwd
/mnt/samba/apps
[root@cs-client apps]# ls -ltr
total 0
-rwxr-xr-x. 1 root root 0 Apr  1 23:27  myfile
-rwxr-xr-x. 1 root root 0 Apr  1 23:27 'my docs.docx'
[root@cs-client apps]# touch client_testfile
[root@cs-client apps]# ls -ltr
total 0
-rwxr-xr-x. 1 root root 0 Apr  1 23:27  myfile
-rwxr-xr-x. 1 root root 0 Apr  1 23:27 'my docs.docx'
-rwxr-xr-x. 1 root root 0 Apr  1 23:41  client_testfile
[root@cs-client apps]#
```

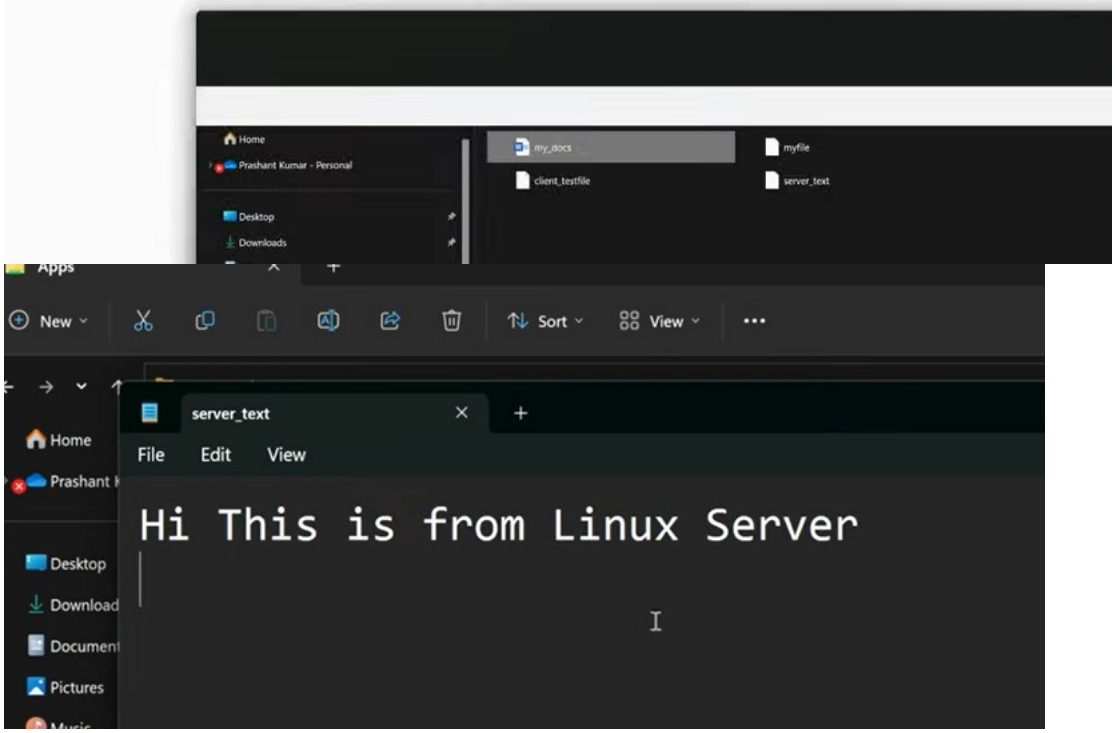
check in server Side

```
[root@cs-server apps]#
[root@cs-server apps]# pwd
/samba/apps
[root@cs-server apps]# ls -ltr
total 0
-rwxrwxrwx. 1 root   root   0 Apr  1 13:47  samba_testfile
-rw-r--r--. 1 root   root   0 Apr  1 13:57  myfile
-rwxr--r--. 1 nobody nobody 0 Apr  1 13:57 'my docs.docx'
-rwxr--r--. 1 nobody nobody 0 Apr  1 14:11  client_testfile
[root@cs-server apps]#
```



 # Read the file in windows

```
[root@cs-server apps]#
[root@cs-server apps]# vi server_text.txt
[root@cs-server apps]#
```



- groupadd smbgrp
- useradd -M -d /samba_secure -s /usr/sbin/nologin -G smbgrp testuser

- mkdir /samba_secure
- chown testuser:smbgrp /samba_secure
- chmod 2770 /samba_secure
- chcon -t samba_share_t /samba_secure

- smbpasswd -a testuser
- smbpasswd -e testuser

```
[root@cs-server /]#
[root@cs-server /]# groupadd smbgrp
[root@cs-server /]# useradd -M -d /samba_secure -s /usr/sbin/nologin -G smbgr
p testuser
Creating mailbox file: File exists
[root@cs-server /]# id testuser
uid=1003(testuser) gid=1005(testuser) groups=1005(testuser),1004(smbgrp)
[root@cs-server /]#
```

```
lrwxrwxrwx.   1 root   root      7 Jun 22  2021 lib -> usr/lib
lrwxrwxrwx.   1 root   root      7 Jun 22  2021 bin -> usr/bin
dr-xr-xr-x.   5 root   root   4096 Nov 21 08:03 boot
drwxr-xr-x.   2 root   root      6 Jan  4 03:19 app
drwxr-xr-x.   3 root   root   4096 Jan  4 14:16 app1
drwxr-xr-x.   3 root   root   4096 Jan  4 14:17 app2
drwxr-xr-x.   2 root   root      6 Jan  5 08:30 test
drwxr-xr-x.  14 root   root    169 Jan 10 15:43 usr
drwxr-xr-x.  23 root   root   4096 Mar  9 05:13 var
drwxrwxrwx.   3 root   root     18 Mar 28 06:47 server
drwxrwxrwx.   4 nobody nobody   36 Apr  1 14:28 samba
dr-xr-xr-x.  13 root   root      0 Apr  2 05:44 sys
drwxr-xr-x.  21 root   root   3340 Apr  2 05:44 dev
dr-xr-xr-x. 208 root   root      0 Apr  2 05:44 proc
drwxr-xr-x.   4 root   root     34 Apr  2 08:59 home
dr-xr-x---.   7 root   root   4096 Apr  2 10:12 root
drwxr-xr-x.  45 root   root   1340 Apr  2 12:05 run
drwxrwxrwt.  16 root   root   4096 Apr  2 12:26 tmp
drwxr-xr-x. 153 root   root   8192 Apr  2 12:26 etc
[root@cs-server /]#
```

```
[root@cs-server /]#
[root@cs-server /]# mkdir /samba_secure
[root@cs-server /]#
[root@cs-server /]# ls -ld samba_secure/
drwxr-xr-x. 2 root root 6 Apr  2 12:27 samba_secure/
[root@cs-server /]#
[root@cs-server /]# chown testuser:smbgrp samba_secure/
[root@cs-server /]#
[root@cs-server /]# ls -ld samba_secure/
drwxr-xr-x. 2 testuser smbgrp 6 Apr  2 12:27 samba_secure/
[root@cs-server /]#
[root@cs-server /]# chmod 2770 samba_secure/
[root@cs-server /]# ls -ld samba_secure/
drwxrws---. 2 testuser smbgrp 6 Apr  2 12:27 samba_secure/
[root@cs-server /]#
```

```
[root@cs-server /]#
[root@cs-server /]# chcon -t samba_share_t /samba_secure/
[root@cs-server /]#
[root@cs-server /]# smbpasswd -a testuser
New SMB password:
Retype new SMB password:
[root@cs-server /]#
[root@cs-server /]# smbpasswd -e testuser
Enabled user testuser.
[root@cs-server /]#
```

Add the following lines in /etc/smb.conf

```
[Secure]
path = /samba_secure/
valid users = @smbgrp
guest ok = no
writable = yes
browsable = yes
```

Restart the services

```
# systemctl restart smb
# systemctl restart nmb
```

```
[root@cs-server /]#
[root@cs-server /]# vi /etc/samba/smb.conf
```

 # Go to Last / EOF

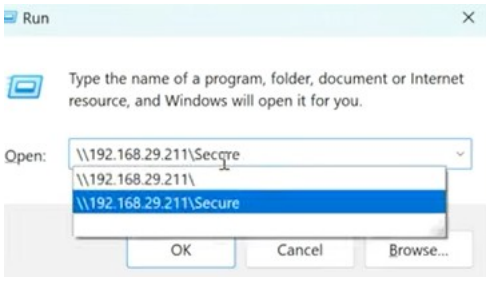
```
# SMB1 is disabled by default. This means clients without support for SMB2 or
# SMB3 are no longer able to connect to smbd (by default).

[global]
        workgroup = WORKGROUP
        netbios name = centos
        security = user
        map to guest = bad user
        dns proxy = no

[Apps]
        comment = Shared Dir
        path = /samba/apps
        browsable = yes
        writable = yes
        guest ok = yes
        guest only = yes
        read only = no
```

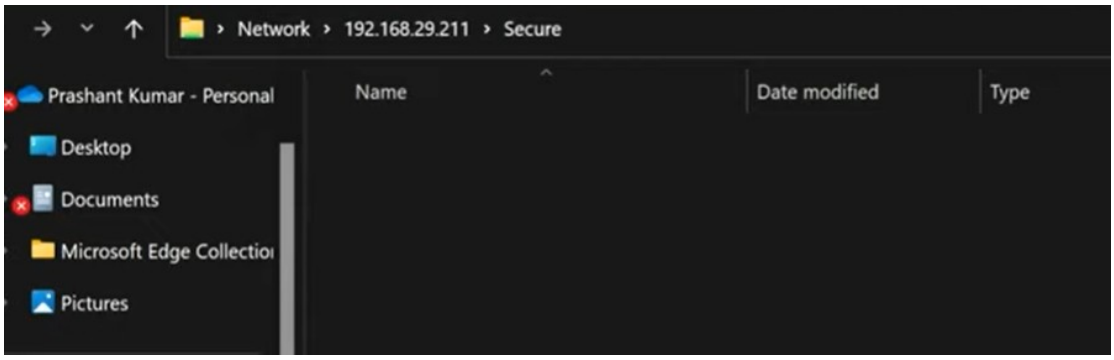
 # Shift+ I

```
[Apps]
        comment = Shared Dir
        path = /samba/apps
        browsable = yes
        writable = yes
        guest ok = yes
        guest only = yes
        read only = no

[Secure]
        path = /samba_secure
        valid users = @smbgrp
        guest ok = no
        writable = yes
        browsable = yes

:wq
```

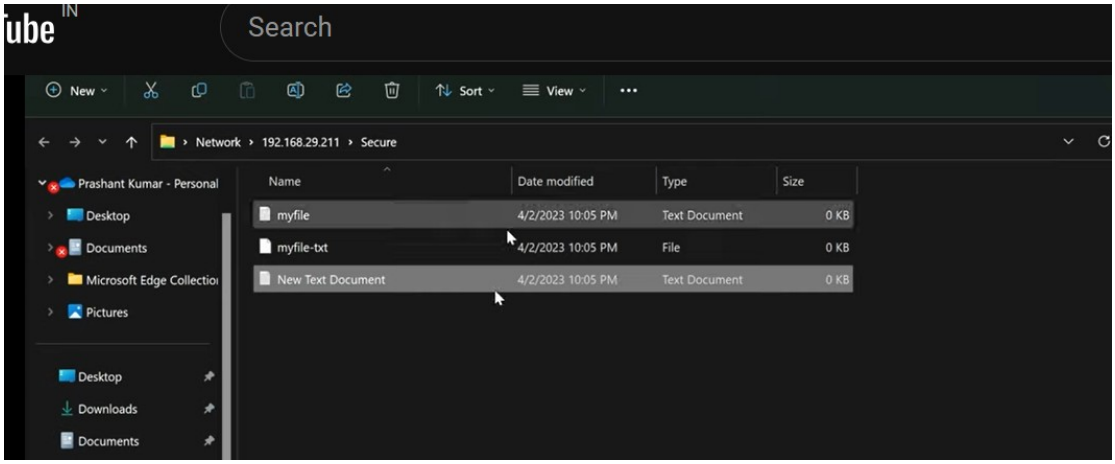
```
[root@cs-server /]# systemctl restart smb.service nmb.service
[root@cs-server /]#
```

 # Windows + R / run cmd






```
[root@cs-server /]#
[root@cs-server /]# cd samba_secure/
[root@cs-server samba_secure]# ls
[root@cs-server samba_secure]# touch myfile-txt
[root@cs-server samba_secure]# touch myfile.txt
[root@cs-server samba_secure]# ls
myfile-txt  myfile.txt
[root@cs-server samba_secure]#
```




```
[root@cs-server samba_secure]# ls
 myfile-txt  'New folder'
 myfile.txt  'New Text Document.txt'
[root@cs-server samba_secure]#
```